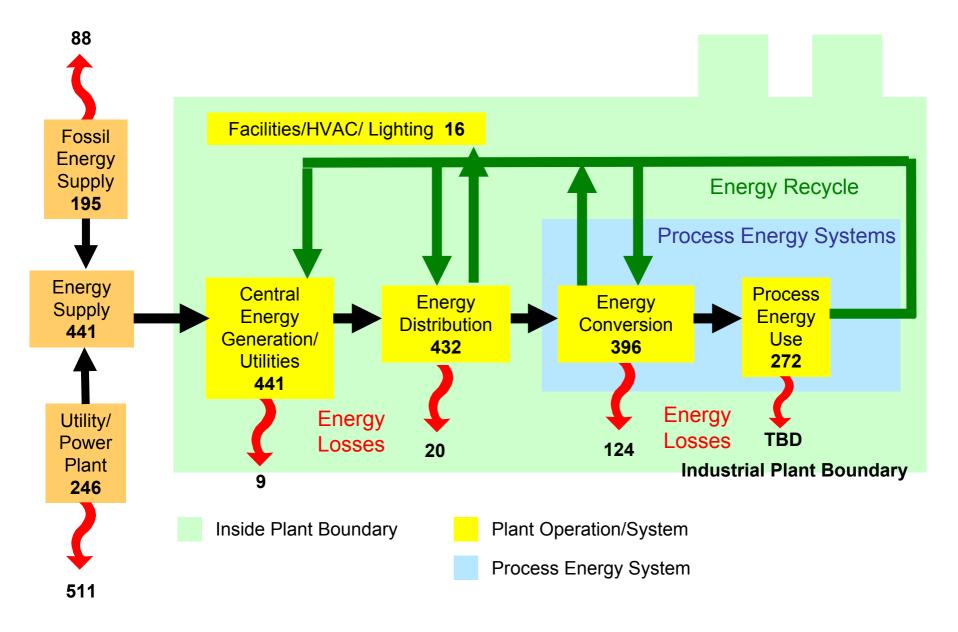
## NAICS 3313 Aluminum and Alumina Total Energy Input for Heat and Power: 958 Trillion Btu



## **NAICS 3313 Aluminum and Alumina** Distribution **Energy Footprint: 958 Trillion Btu** losses 6 Facilities/HVAC/Lighting 16 **Process Energy Systems** Fossil Recycle Energy Energy Supply Recycle Energy Steam. 195 By-product fuels and heat feedstocks, heat **Process Energy Energy Conversion Central Energy Energy Use** Supply 396 Generation/ 272 441 **Energy Utilities 441** • Process Heating (190) **Distribution** •Fuels • Electrolytic cells (heat exchangers, condensers, fired • Steam Plant (33) 432 Anode Production heaters, heat pumps) Purchased • Fossil Power (3)) Refining Electricity • Electrochemical (172) • Direct Fuel Supply Rolling/Extrusion and Steam Steam Piping (150) Machine Drives (33) Scrap Treatment/ Fuel Piping Purchased (pumps, compressors, fans, blowers, Casting Transmission Electricity (246) conveyors, mixers) Waste Handling Lines **Utility/** • Onsite Transport (1) **Power Plant** 246 Energy Losses **Energy Losses** Losses in boilers and Losses in pipes, valves, Losses due to equipment electricity generation traps, electrical inefficiency (motors, Process energy losses losses 9 transmission lines 20 mechanical drive, waste Electricity from waste heat, flared heat) 124 generation and gases, by-products transmission **TBD Industrial Plant Boundary** losses **511**

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